

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

What is claimed is:

1. (previously presented) A processor comprising:
at least one local storage designed to contain a plurality of floating point values;
at least one floating point execution unit, said floating point execution unit
further including a separator configured to retrieve said plurality of floating point values from
said local storage and make available a mantissa portion from and corresponding to each of
said plurality of floating point values, said floating point execution unit further including at
least one adder unit configured to receive said mantissas in an order and number determined
by said adder unit;
a compare unit operatively coupled to said at least one local storage further
comprising a separator configured to retrieve said plurality of floating point values from said
local storage and make available at least a mantissa portion of each of said floating point
values, and the compare unit configured to make available a carry-out bit value resulting
from an addition of said mantissas portions;
an end-around-carry bit calculator unit operatively coupled to said compare unit and
configured to provide a correct value of an end-around-carry calculation available as output,
based on values received from said compare unit ; and
a rounding calculator operatively coupled to the end-around-carry bit calculator to
calculate a rounding choice upon having the adder unit complete the addition and
communicating the choice to the adder unit.
2. (original) The processor of claim 1 where said compare unit further comprises
as a component contained therein said end-around-carry bit calculator unit.
3. (original) The processor of claim 1 where said at least one floating point
execution unit further comprises as a component therein said end-around-carry bit calculator
unit.
4. cancelled

5. cancelled

6. cancelled

7. (previously amended) A method for computing a floating point subtraction comprising:

- (a) providing a first floating point value having a sign, an exponent, and a mantissa;
- (b) providing a second floating point value having a second sign, a second exponent, and a second mantissa;
- (c) performing a compare of said two floating point values and providing the output of said compare to an end-around-carry calculator unit;
- (d) calculating an end-around-carry value in said end-around-carry calculator unit;
- (e) sending said first and second mantissas to an adder;
- (f) aligning said second mantissa to said first mantissa in said adder;
- (g) starting an addition of said first mantissa and a two's compliment form of said second mantissa in said adder;
- (h) providing said calculated end-around-carry value;
- (i) using said end-around-carry value to calculate a Guard Round Sticky and determine a rounding choice before said addition is completed;
- (j) completing said addition in said adder;
- (k) using said rounding choice to choose a correct rounded answer from said addition upon having said addition is completed; and
- (l) providing a final answer using said rounding choice, said first and second signs, and said first and second exponents;